

DEPARTMENT OF ECOLOGY  
INSPECTION REPORT

To: D. Cargill  
Inspectors: M. Turvey, J. Polayes-Wien  
Date of Visit: November 17, 1992  
Date of Inspection Report: December 15, 1992  
Permit No.: WA- N/A New Industry: ☐ Yes ☒ No  
Permit Expires: N/A

Type of Inspection:

<input type="checkbox"/> Permit Application	<input type="checkbox"/> Complaint	<input type="checkbox"/> Announced
<input type="checkbox"/> Permit Renewal	<input type="checkbox"/> Enforcement	<input checked="" type="checkbox"/> Unannounced
<input type="checkbox"/> Permit Compliance	<input checked="" type="checkbox"/> Source Control	

Facility: Ace Galvanizing, Inc.  
Address : 429 South 96th Street  
City: Seattle ZIP: 98108 County: King  
Telephone: (206) 762-0330  
Person Contacted: Mike Buckland  
Type of Facility: Hot dip galvanizing, pickling and oiling  
Receiving Water: Duwamish Waterway  
Type of Treatment System: BMP's, Recirculation

Complies with permit conditions: ☐ Yes ☐ No ☒ N/A

**NARRATIVE:** We arrived at the facility at 10:50 and met with Mike Buckland, General Manager who agreed to show us the facility. We began with looking at the facility's warehouse. The warehouse is used for storage of drums containing muriatic acid, zinc skimmings, iron salts, and zinc ammonium along with bags of chloride crystal. There were no floor drains in the warehouse and the drums and bags of crystal were stored neatly.

Mr. Buckland explained that they galvanize heavy structural equipment. A complete description of the process is described in a letter to Ecology dated September 18, 1992. Basically the process includes surface preparation which begins with degreasing pieces in a hot caustic dip, rinsing with water, pickling pieces in a hot dilute solution of sulfuric acid to remove scale and rinsing again with water; prefluxing to dissolve the oxide which forms on steel and cover pieces with flux using zinc ammonium chloride; galvanizing by immersing pieces in molten zinc; and finishing which includes air drying and deburring.

In addition, Ace Galvanizing operates a pickling and oiling operation for piping (see photos #4,6,7). This process includes surface preparation which includes degreasing piping, followed by a caustic rinse, hydrochloric acid pickling, hydrochloric acid rinse, neutralization with sodium metasilicate, and oiling.

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The pickling and oiling operation is located next to the warehouse. It consists of a series of tanks and finally a bermed area where pipes are set up to drip dry and are prepared for shipment. Mr. Buckland said that the oil in this pickling process is only changed about once every two years. The tanks are protected by a roof and partial side walls. The tanks rest on a concrete surface. There were no drains in this area. Also next to the warehouse is a 8-900 gallon tank resting on a metal pallet without secondary containment or cover (see photo #5). The tank is used to store waste oil. Mr. Buckland said that it is not full and it takes a long time to accumulate oil.

From the warehouse we looked at their maintenance shop. The shop contains small quantities of spray paints, brake fluid, and lubricants. Mr. Buckland explained that they need to fabricate replacement parts because the acids used in the processes eventually destroy equipment. Next to the shop three 55 gallon drums were stored within a covered bermed enclosure. The drums contain hydraulic oil, motor oil and solvent. Smaller buckets are used to capture any spills from the drums. A 55 gallon drum containing transmission fluid (see photo #8) was stored next to the bermed enclosure but outside the berm.

Mr. Buckland said that they generate an iron mash from their process which is shipped to Arlington. They use a centrifuge to separate metal crystals from the acids. This separation produces a dross which is sold to mining operations and to fertilizer companies. There were chunks of dross stored in the yard outside on the pavement. Mr. Buckland said that the dross would be picked up soon.

The dross was located next to several large tanks which is part of the recirculation system described above (see photos #11 and 13). Also stored outside of the bermed enclosure, near the dross were 2 batteries. Mr. Buckland directed one of his workman to remove the batteries and store them inside. The facility stores five 55 gallon drums of diesel within the bermed enclosure holding the tanks.

We walked to the entry area for the main building shown in photos 18, 19 and 20 and declined an opportunity to look at the inside galvanizing process because of the very strong fumes. Fumes are vented to the roof and released to the atmosphere. I mentioned to Mr. Buckland that we have received complaints concerning the fumes from neighboring

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businesses. There was a particular instance where the fumes were reported to be so strong that employees were sent home. I asked if he knew of any instance where something unusual happened that would have caused this. He said we were probably referring to when one of their tanks failed that was full of molten zinc. At the time the only containers they had on site to transfer the zinc to were painted 55 gallon drums. They needed to transfer the zinc to small containers because if the material had been able to cool it would have been unmovable. In a solid phase it would weigh 450,000 lbs.. The heat from the molten zinc burned off the paint sending strong fumes to the atmosphere. They now keep a spare tank and unpainted drums on site in case of emergencies.

From here we looked at their storage yard. Mr. Buckland said they have plans to blacktop the entire yard. He said this would help keep the gravel out of the storm sewer. The yard is used to store parts (see photos 21,22 and 23). They had leased part of their yard to a company which built a satellite dish and building to house computers. The company removed the dish but abandoned the building. Mr. Buckland had no immediate plans to do anything with this part of the property.

We returned to the office and asked to see some of the manifests for transferring of hazardous waste to Arlington. Mr. Buckland said that they generate sludge from the acid baths that are filtered. The manifests described the waste as bulk super bags of ferrous oxide contaminated with caustic soda and metal. He also said that they had an underground storage tank pulled out by Northwest Enviroservice about 3-4 years ago. The tank was found not to be leaking.

We departed the facility at 12:35.


  
Martha Turvey, Inspector  
Elliott Bay Action Team



PHOTO NO.: 1

DATE: 11/17/92

TIME: 12:04

TAKEN BY:

J. Polnys-Wien

WITNESS:

M. Turvey

FILM: Kodak 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Inc. Seattle

DESCRIPTION:

Interior of  
warehouse used  
for storage of  
supplies, chemicals.  
No drains in  
building

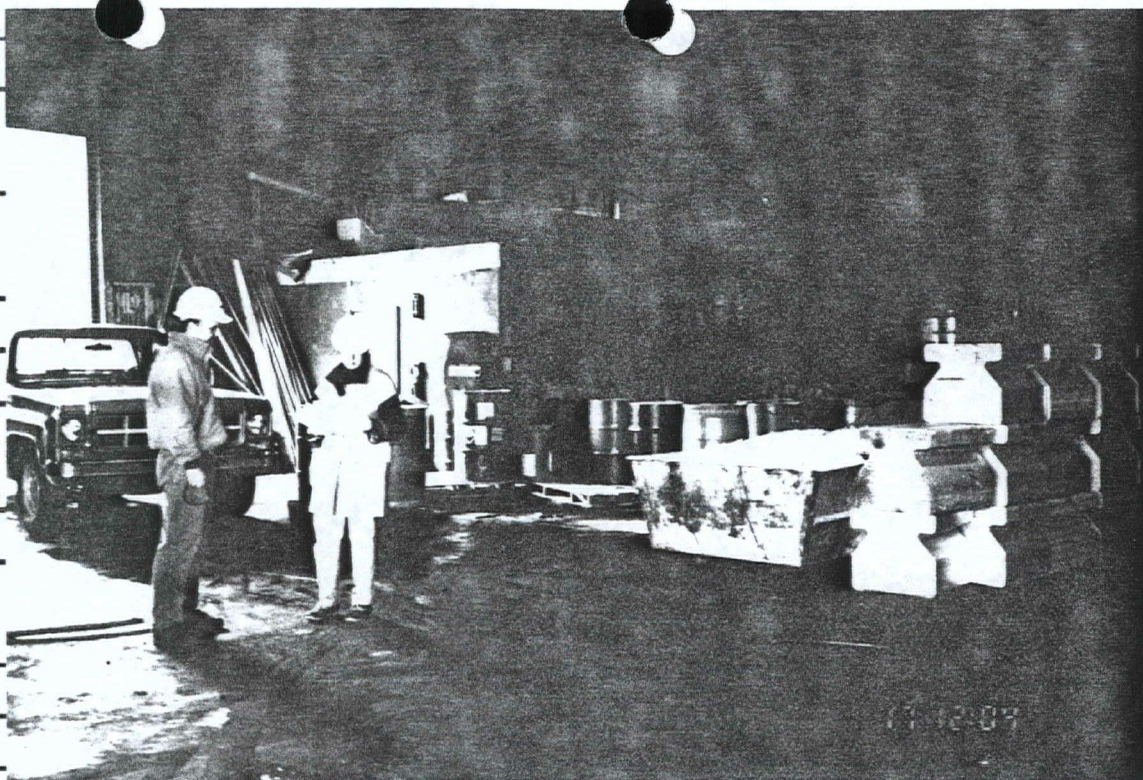


PHOTO NO.: 2

DATE: 11/17/92

TIME: 12:04

TAKEN BY:

J. Polnys-Wien

WITNESS:

M. Turvey

FILM: Kodak 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Inc. Seattle

DESCRIPTION:

Same building  
as photo #1  
Drums stored  
inside warehouse





PHOTO NO.: 3

DATE: 11/17/92

TIME: 12:05

TAKEN BY:

J. Polayes - Wien

WITNESS:

M. Turvey

FILM: Kodak 200

CAMERA: 35mm

LOCATION:

Acc Galvanizing  
Seattle

DESCRIPTION:

Propane tank  
stored outside

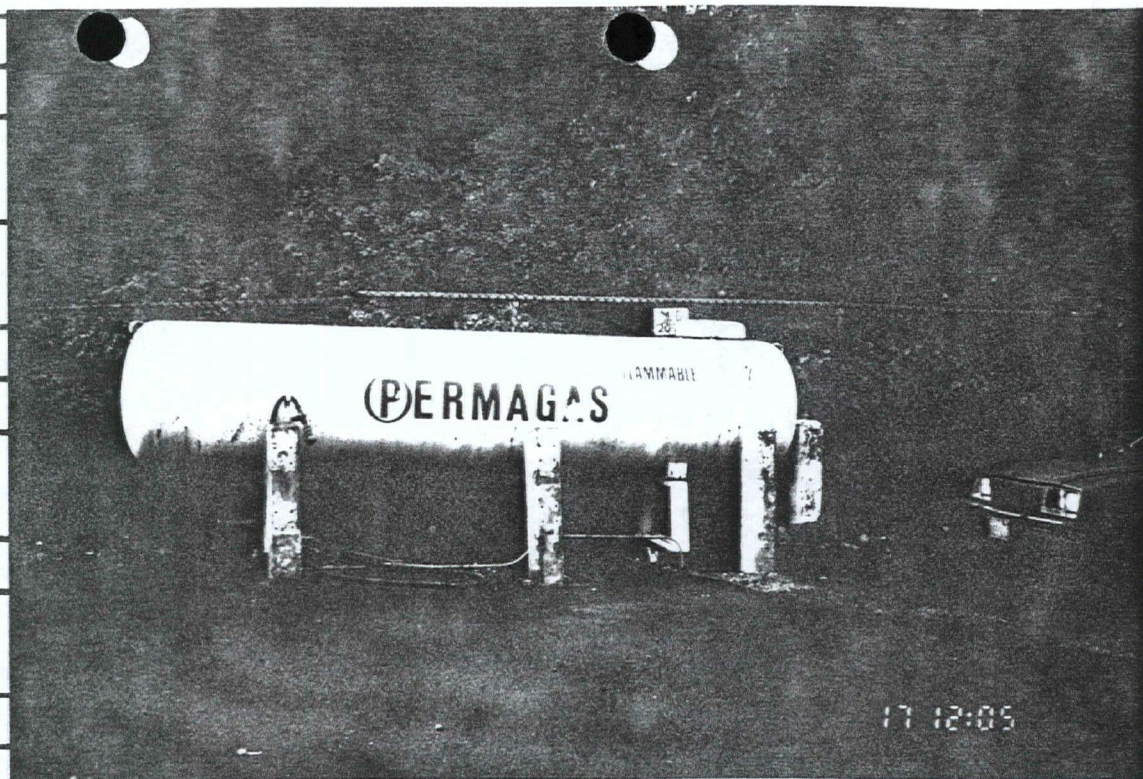


PHOTO NO.: 4

DATE: 11/17/92

TIME: 12:08

TAKEN BY:

J. Polayes - Wien

WITNESS:

M. Turvey

FILM: Kodak 200

CAMERA: 35mm

LOCATION:

Acc Galvanizing  
Seattle

DESCRIPTION:

Tanks contain  
hydrochloric acid,  
acid rinse,  
inhibitor, & hydraulic oil. On side of  
warehouse, under cover.





PHOTO NO.: 5

DATE: 11/17/92

TIME: 12:09

TAKEN BY:

J. Polayes - Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35mm

LOCATION:

Air galvanizing line

Seattle, WA

DESCRIPTION:

Tanks used to  
store waste oil.

No secondary  
containment or cover



PHOTO NO.: 6

DATE: 11/17/92

TIME: 12:09

TAKEN BY:

J. Polayes - Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35mm

LOCATION:

Air galvanizing

Seattle, WA

DESCRIPTION:

Tanks on side of  
warehouse. Pipes  
at end of process

are wrapped in plastic. Stored on pallets within bermed enclosure  
to capture any oil that may drip from pipes. Enclosure is  
lined with plastic to make it easier to collect oil.

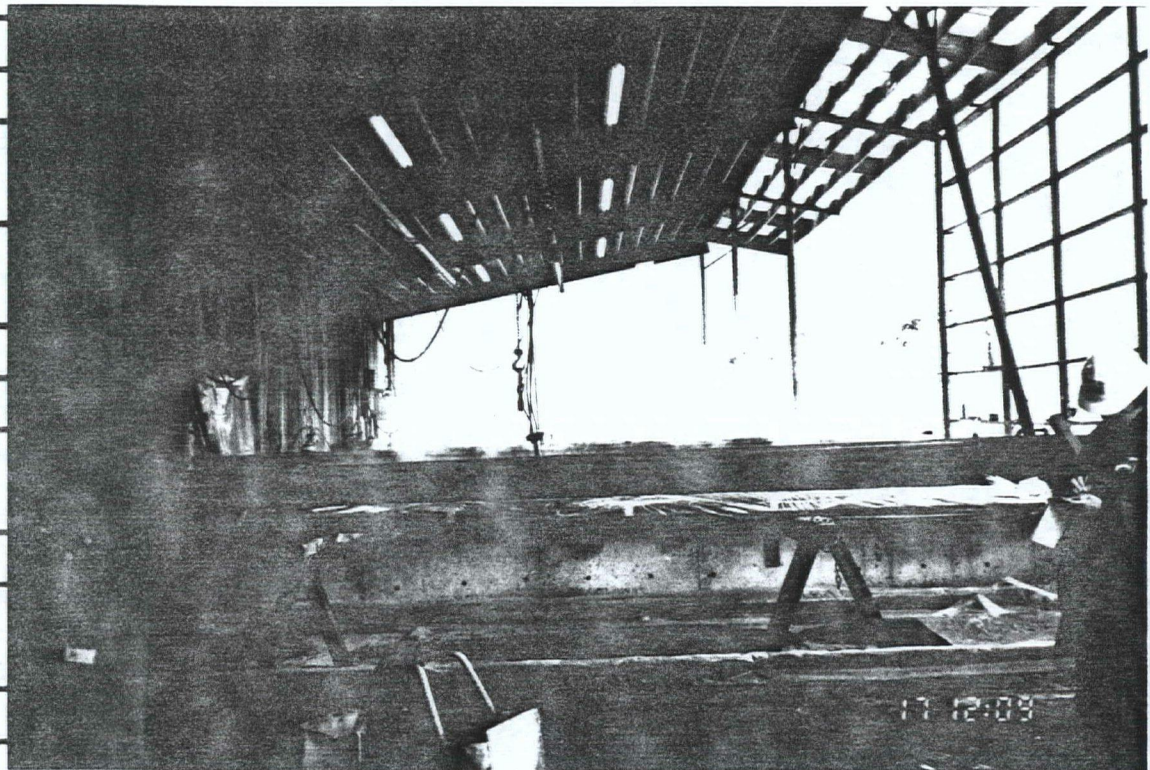




PHOTO NO.: 7  
DATE: 11/17/92  
TIME: 12:09  
TAKEN BY:  
J. Polaygs-Wier  
WITNESS:  
M. Turvey  
FILM: KODAK 200  
CAMERA: 35 mm  
LOCATION:  
Ace Galvanizing  
Seattle, WA.  
DESCRIPTION:  
Same as photo #6

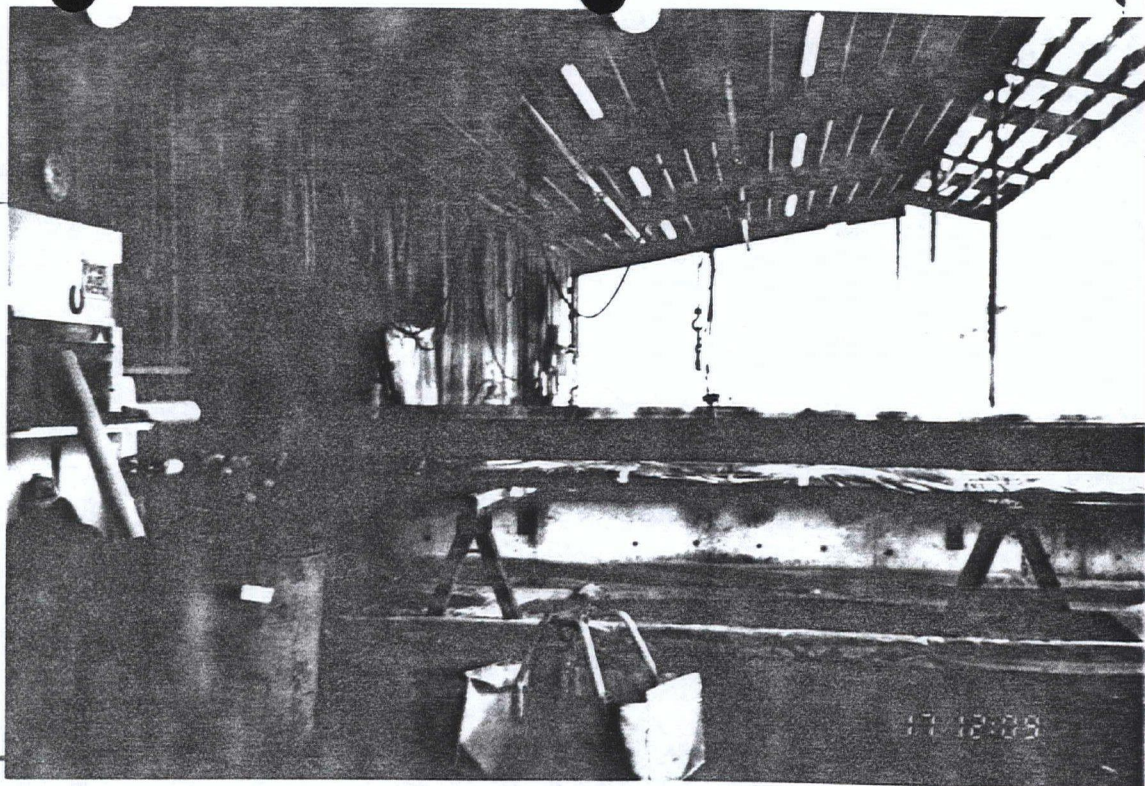


PHOTO NO.: 8  
DATE: 11/17/92  
TIME: 12:18  
TAKEN BY:  
J. Polaygs-Wier  
WITNESS:  
M. Turvey  
FILM: KODAK 200  
CAMERA: 35 mm  
LOCATION:  
Ace Galvanizing  
Seattle, WA.  
DESCRIPTION:  
Drums of hydraulic  
transmission fluid  
oil, motor oil &  
solvent stored outside under cover with berm. One drum outside  
of bermed area, contains transmission fluid.

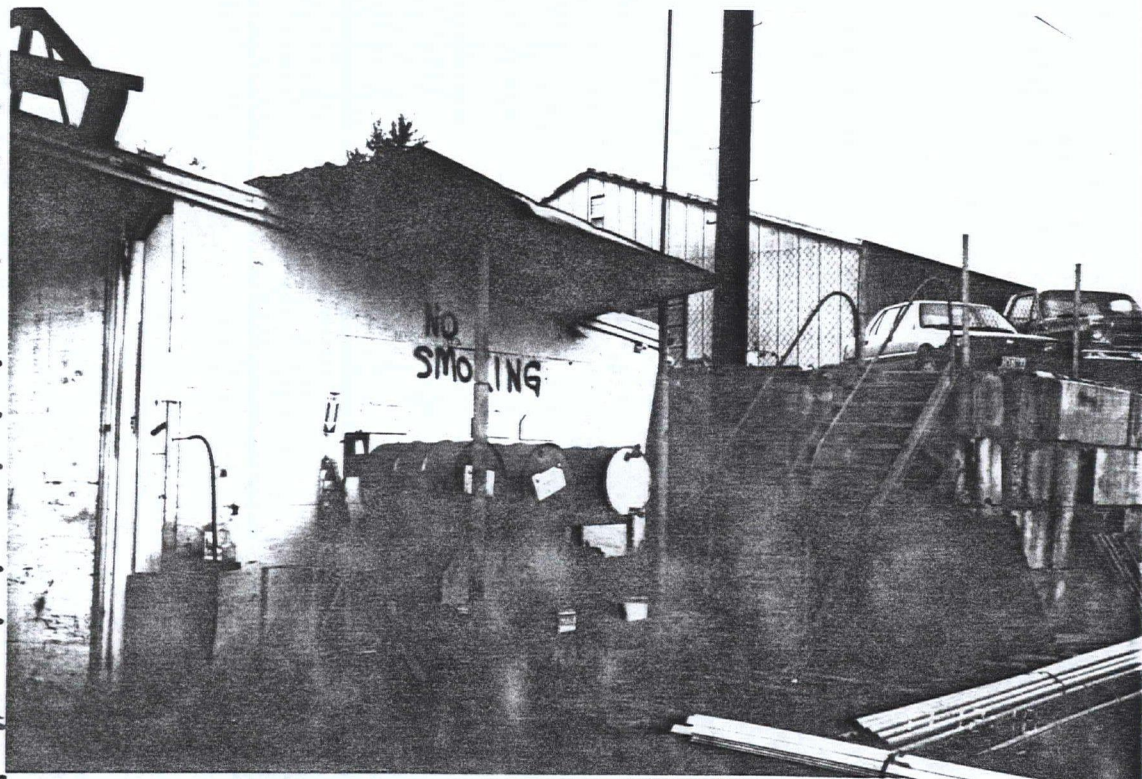




PHOTO NO.: 9  
DATE: 11/17/92  
TIME: 12:24  
TAKEN BY: J. Polyes-Wien  
WITNESS: M. Turvey  
FILM: KODAK 200  
CAMERA: 35mm  
LOCATION: Ace galvanizing  
Seattle, WA  
DESCRIPTION: Inside maintenance  
shop - no drums

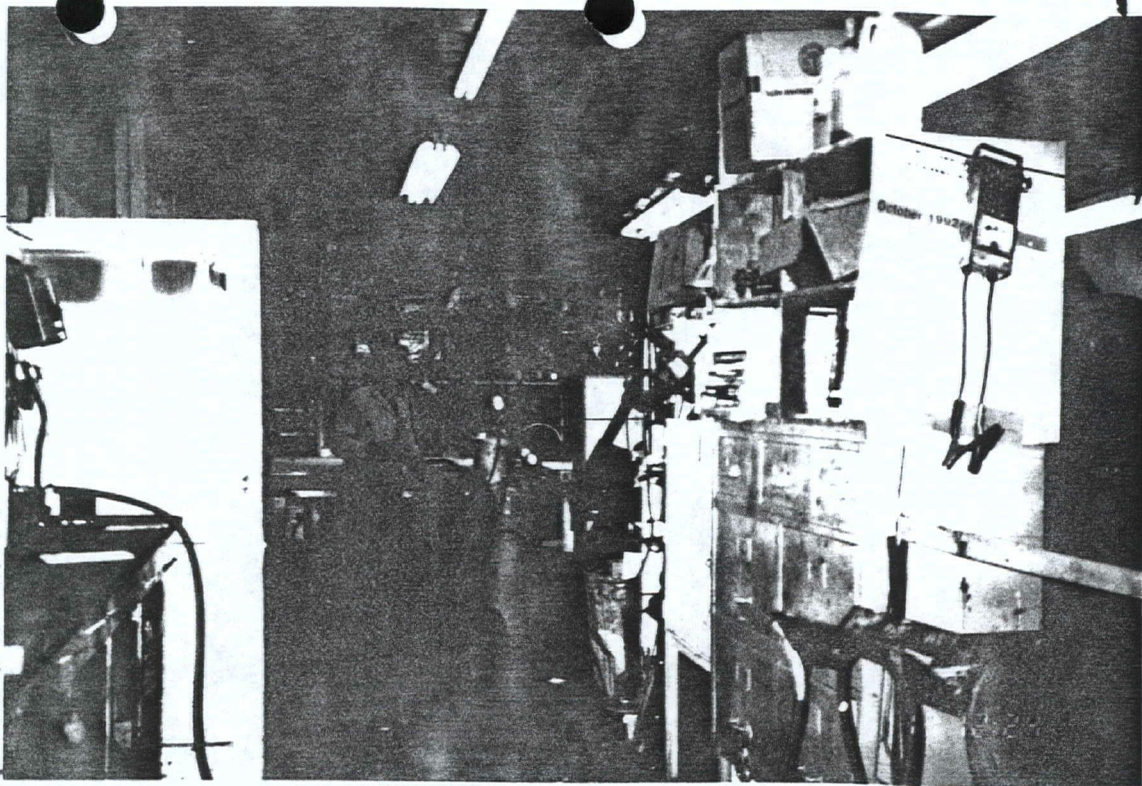


PHOTO NO.: 10  
DATE: 11/17/92  
TIME: 12:25  
TAKEN BY: J. Polyes-Wien  
WITNESS: M. Turvey  
FILM: KODAK 200  
CAMERA: 35mm  
LOCATION: Ace galvanizing  
Seattle, WA  
DESCRIPTION: View of yard  
looking towards  
building where bulk  
of galvanizing is done.

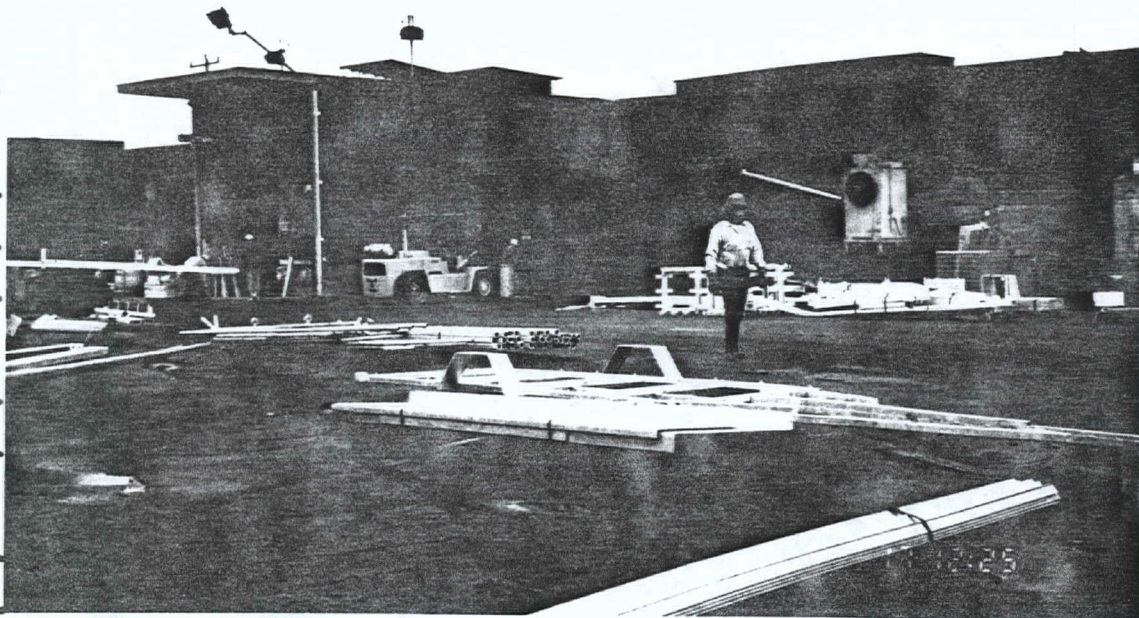




PHOTO NO.: 11

DATE: 11/17/92

TIME: 12:25

TAKEN BY:

J. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Acc Galvanizing  
Seattle, WA.

DESCRIPTION:

Looking at main  
building where  
galvanizing is done.  
Tanks used to  
recirculate acids & water back into process. Centrifuge removes  
metal crystals.



PHOTO NO.: 12

DATE: 11/17/92

TIME: 12:26

TAKEN BY:

J. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Acc Galvanizing  
Seattle, WA.

DESCRIPTION:

Same as photo #8  
but shows proximity  
of drum storage  
to storm drain.

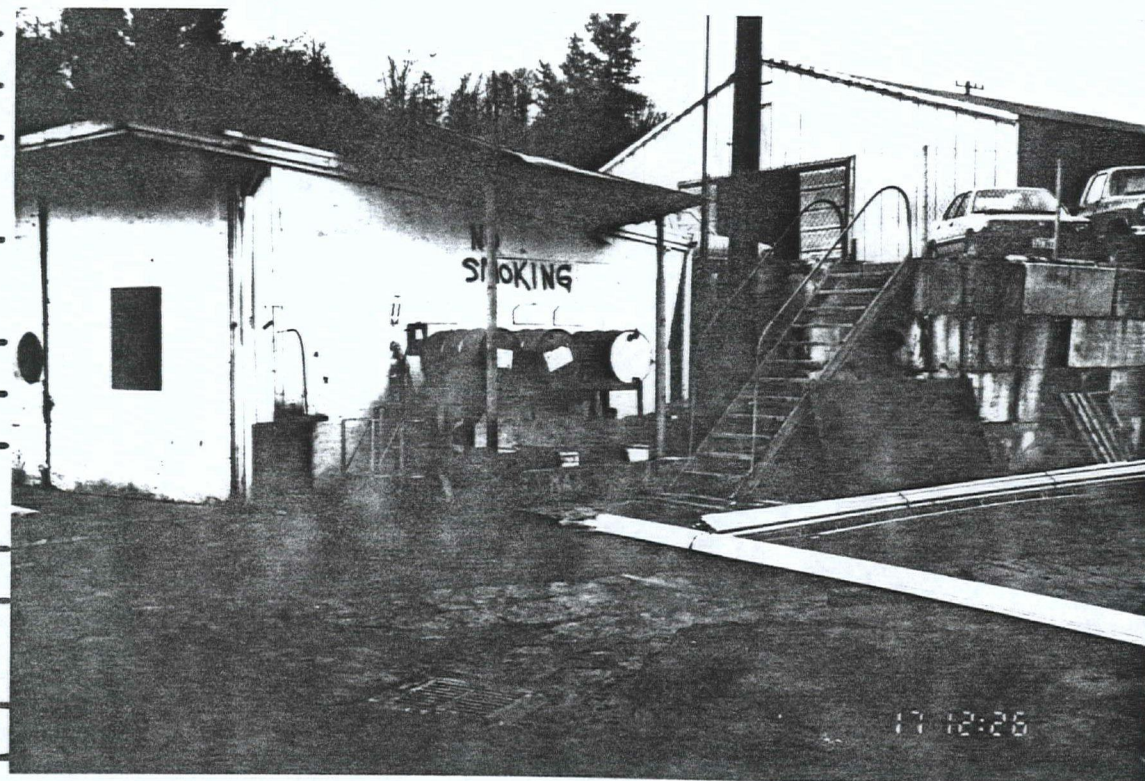




PHOTO NO.: 13

DATE: 11/17/92

TIME: 12:29

TAKEN BY:

J. Polansky-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Seattle, WA

DESCRIPTION:

Chunks of iron &  
zinc dross &

Recirculating tank.

Two batteries on  
ground next to berm enclosure.



PHOTO NO.: 14

DATE: 11/17/92

TIME: 12:43

TAKEN BY:

J. Polansky-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Seattle, WA

DESCRIPTION:

Inside zinc  
galvanizing  
operation.





PHOTO NO.: 15

DATE: 11/17/92

TIME: 12:43

TAKEN BY:

J. Polymes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35mm

LOCATION:

Ace Galvanizing  
Seattle, WA

DESCRIPTION:

Facility maintains  
forklift to  
move materials.

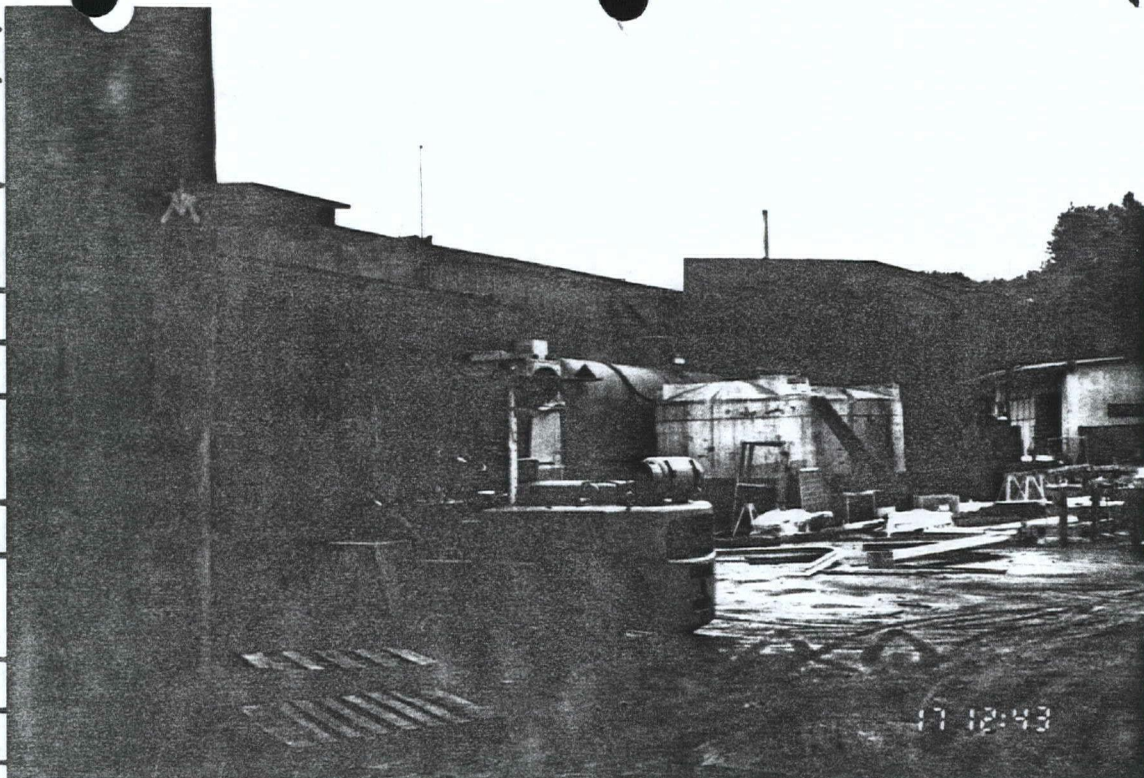


PHOTO NO.: 16

DATE: 11/17/92

TIME: 12:45

TAKEN BY:

J. Polymes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35mm

LOCATION:

Ace Galvanizing  
Seattle, WA

DESCRIPTION:

Inside look at  
galvanizing  
operation. Shields  
on left used to prevent back splash  
on workers.

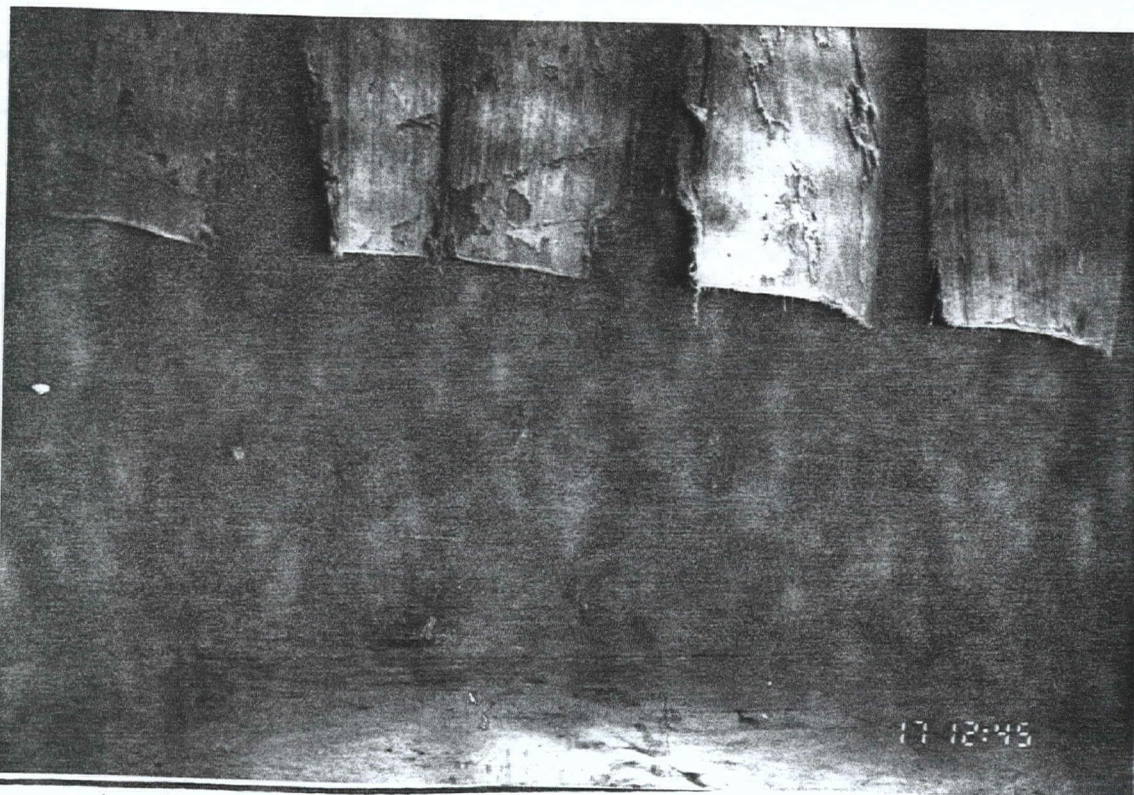




PHOTO NO.: 17

DATE: 11/17/92

TIME: 12:55

TAKEN BY:

T. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Acc galvanizing  
Seattle, Wa

DESCRIPTION:

Backyard of  
property used to  
store equipment  
& parts



PHOTO NO.: 18

DATE: 11/17/92

TIME: 12:55

TAKEN BY:

T. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

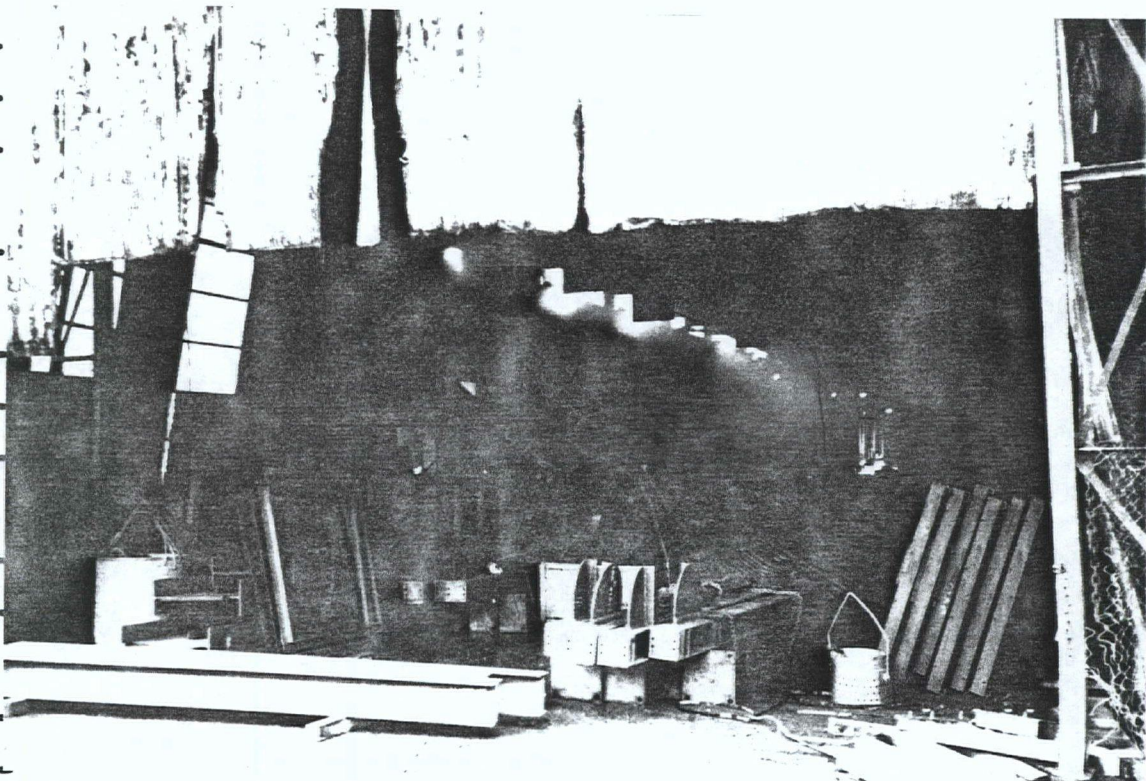
CAMERA: 35 mm

LOCATION:

Acc galvanizing  
Seattle, Wa

DESCRIPTION:

Inside main  
building. Fumes  
from acid tanks  
is vented thru roof.





DATE: 11/17/92  
TIME:             
TAKEN BY: J. Polansky-Wien  
WITNESS: M. Turvey  
FILM: KODAK 200  
CAMERA: 35 mm  
LOCATION: Ace Galvanizing  
Seattle, WA.  
DESCRIPTION: Same as photo #18

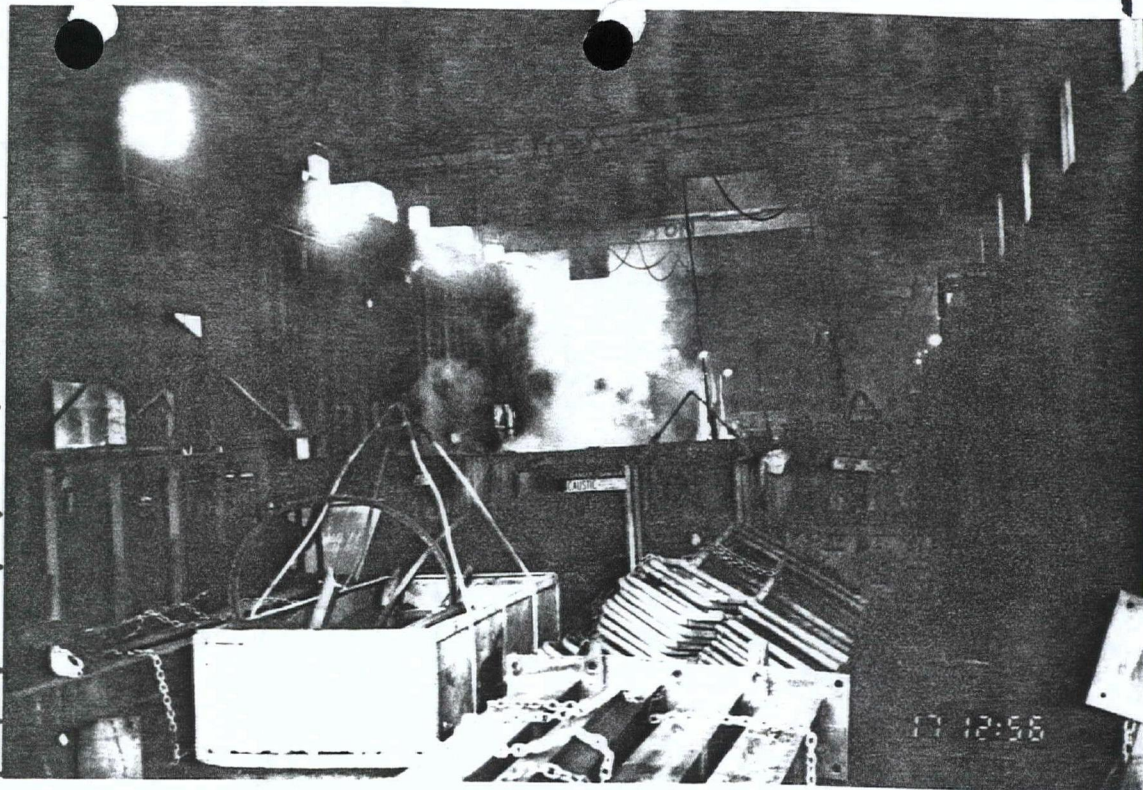


PHOTO NO.: 20  
DATE: 11/17/92  
TIME: 12:57  
TAKEN BY: J. Polansky-Wien  
WITNESS: M. Turvey

FILM: KODAK 200  
CAMERA: 35 mm

LOCATION: Ace Galvanizing  
Seattle, Wa.

DESCRIPTION: Back end of  
main building  
where galvanizing  
is done. yard is muddy from yard  
traffic

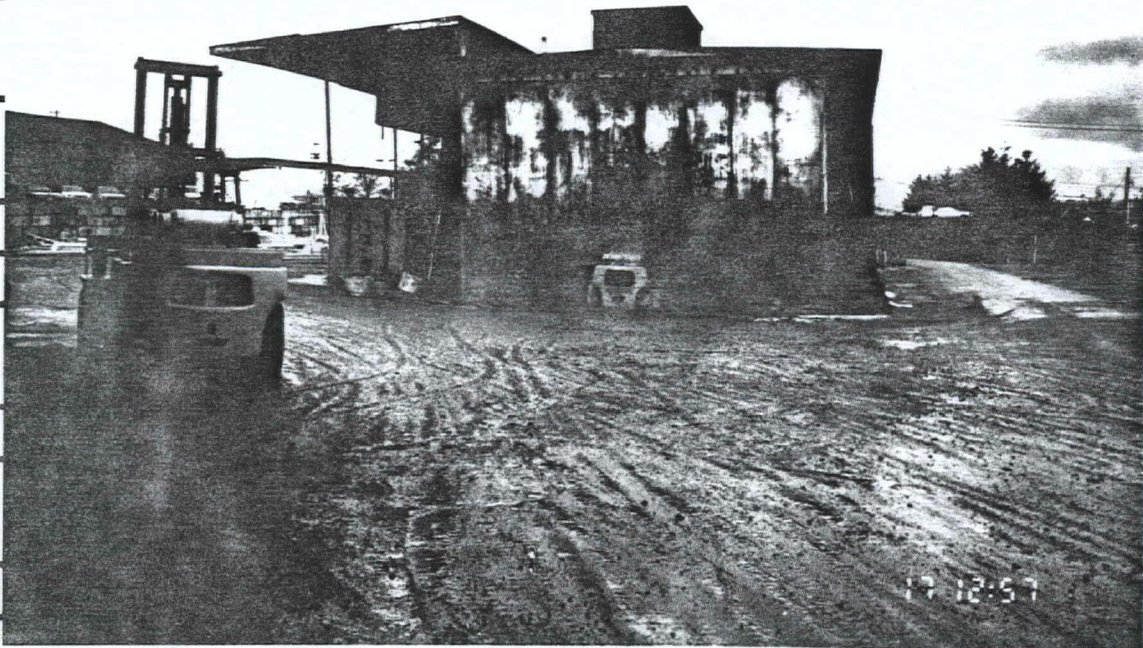




PHOTO NO.: 21

DATE: 11/17/92

TIME: 12:58

TAKEN BY:

J. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Seattle, WA.

DESCRIPTION:

Backyard storage  
of parts

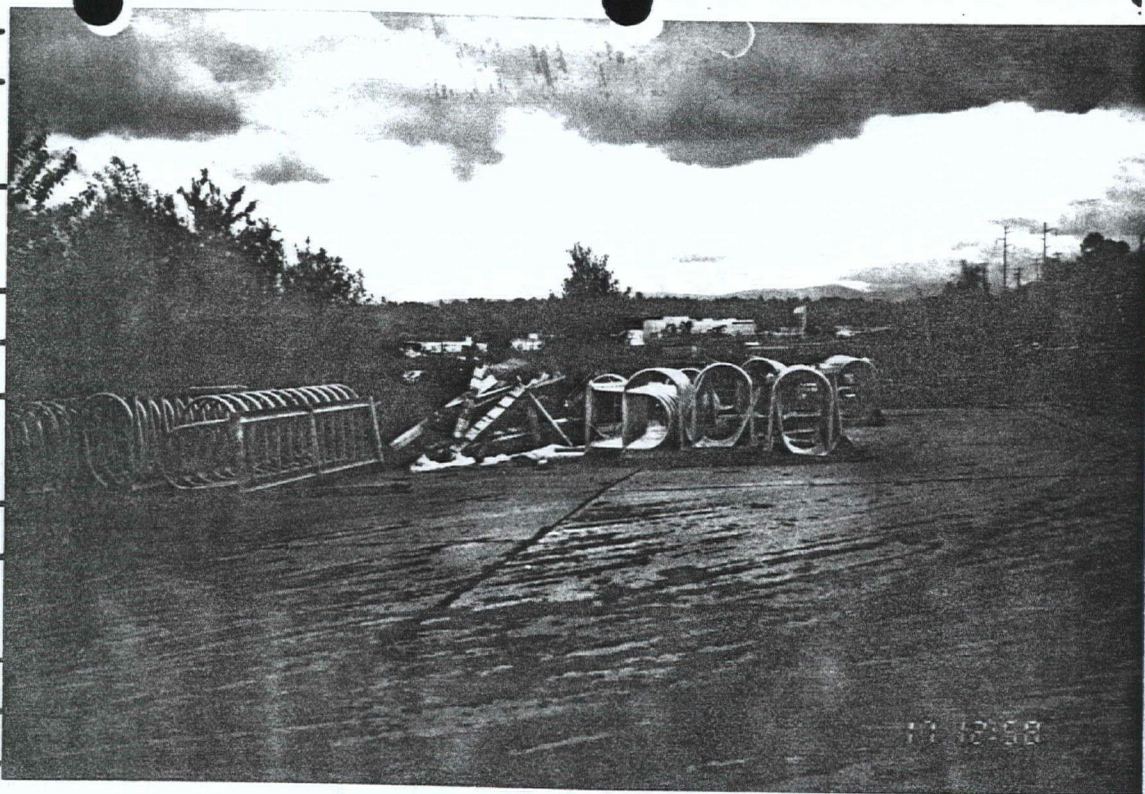


PHOTO NO.: 22

DATE: 11/17/92

TIME: 12:58

TAKEN BY:

J. Polayes-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Ace Galvanizing  
Seattle WA.

DESCRIPTION:

Backyard storage  
of parts





PHOTO NO.: 23

DATE: 11/17/92

TIME: 12:58

TAKEN BY:

J. Polonsky-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

CAMERA: 35 mm

LOCATION:

Acc Galvanizing  
Seattle, WA.

DESCRIPTION:

Backyard storage  
of parts.

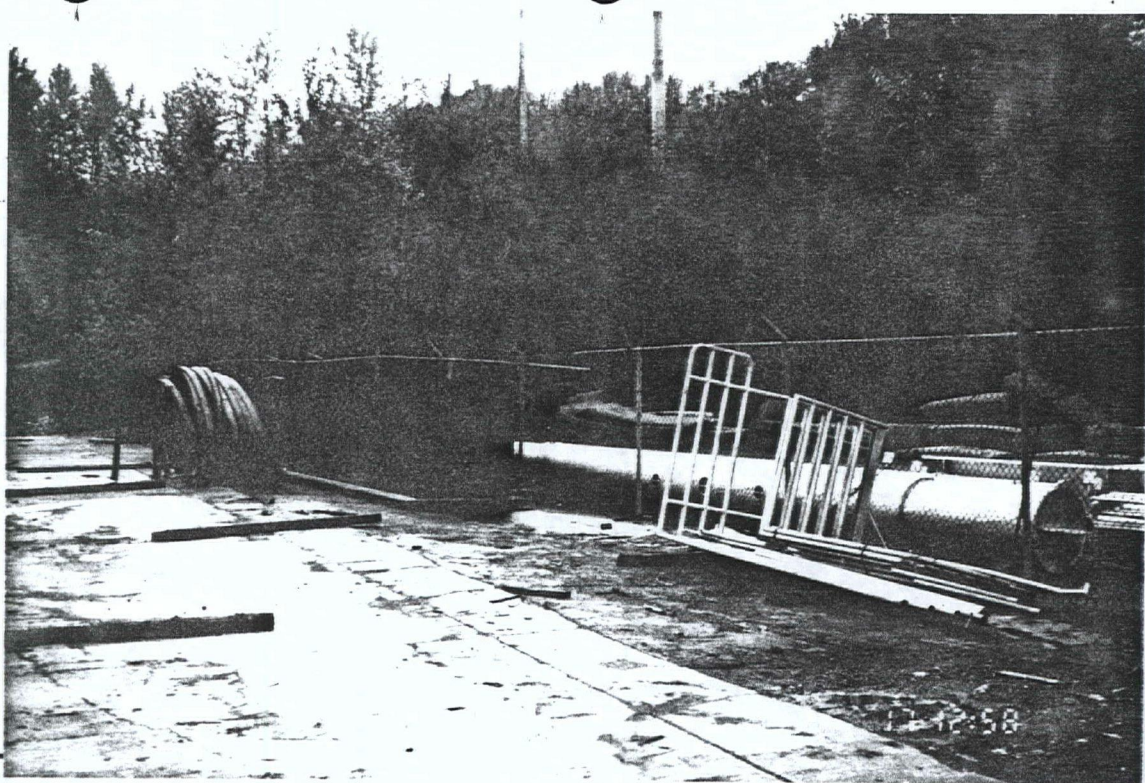


PHOTO NO.: 24

DATE: 11/17/92

TIME: 12:02

TAKEN BY:

J. Polonsky-Wien

WITNESS:

M. Turvey

FILM: KODAK 200

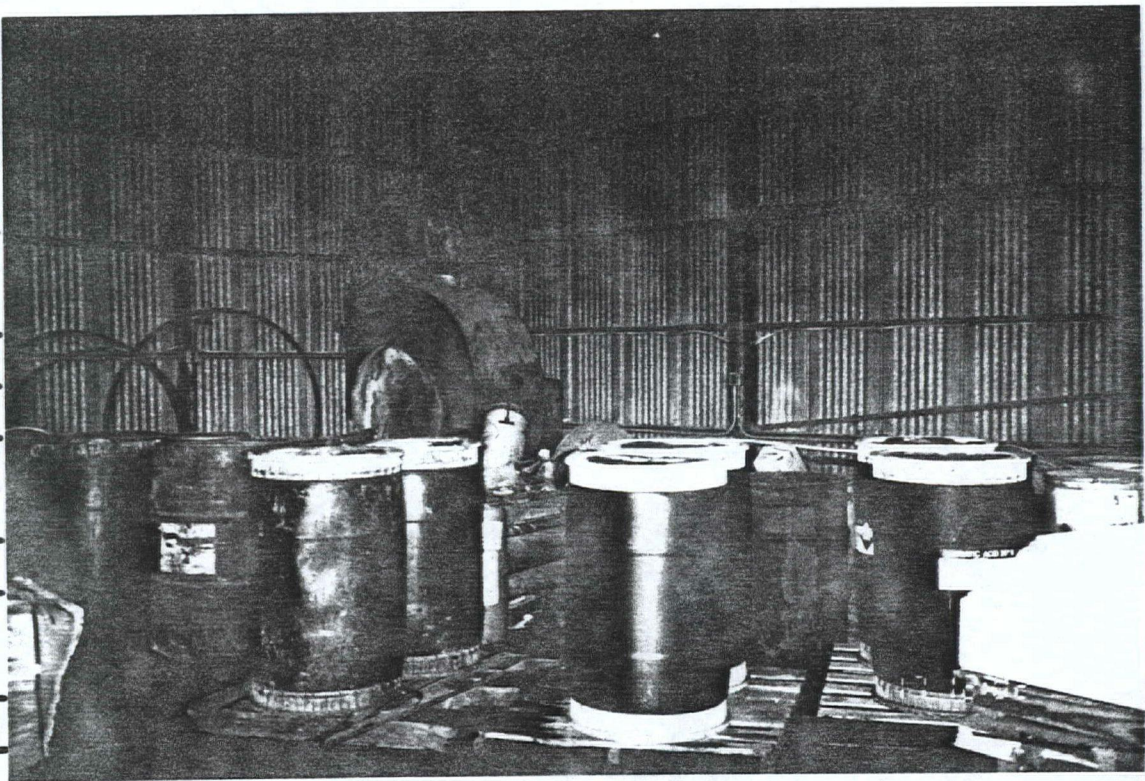
CAMERA: 35 mm

LOCATION:

Acc Galvanizing  
Seattle, WA.

DESCRIPTION:

Inside warehouse -  
drum storage.





DEPARTMENT OF ECOLOGY  
INSPECTION REPORT

*DN*  
TO: Dan Cargill, files  
DATE OF VISIT: 10-28-87  
NEW INDUSTRY: No

INSPECTOR: Lee Dorigan  
PERMIT NO: None  
PERMIT EXPIRES:

TYPE OF INSPECTION

PERMIT APPLICATION \_\_\_\_\_  
PERMIT RENEWAL \_\_\_\_\_  
PERMIT COMPLIANCE \_\_\_\_\_

COMPLAINT \_\_\_\_\_  
ENFORCEMENT compliance  
DROF IN \_\_\_\_\_

FACILITY: Ace Galvanizing 782 8300  
ADDRESS: 621 N. W. 41st Street  
CITY: Seattle, Wash. ZIP: 98107 COUNTY: King

PERSON CONTACTED: Mike Buckland, General Manager & Pete Pedone, Consultant  
TYPE OF FACILITY: Galvanizing, small items

RECEIVING WATER: storm sewers, 2 blocks to the ship canal  
TYPE TREATMENT SYSTEM: containment, alkaline separator in storm drain  
#WAD 099286881

OPERATION: satisfactory

DESCRIPTION: I met Mike Buckland and Pete Pedone at the office of Ace Galvanizing, by previous agreement, to make an inspection to verify the compliance work agreed upon by Ace and supervised by Mr. Pedone. This was the first time that I had inspected this site. The site consists of a paved lot about 1/3 the size of the main site. On the lot is an office building on the front middle of the lot. The office building is two stories with the second stories rented out. A breezeway roof connects the office building with the galvanizing building. The galvanizing building is on the north side of the lot and extends from the front to the back of the lot. The lot slopes down in a east, southeast direction. This means that water drains across the lot from front to back and towards the canal.

The office is in the center of the galvanizing building. The production line moves from east to west, or right to left as view from the front. The sequence of the tanks is: caustic, caustic rinse, acid, acid rinse, flux tank, galvanizing, and quench tanks. All drains inside of this building are concreted. There are berms at each doorway. The bottom story of the two story building contains a large storage room. Off the storage room is a small machine shop and a compressor room. All drains in this building are sealed with concrete. The building was seriously damaged by a spill from a Whiting truck several years ago.

The storm water drain is in the southeast corner of the lot and has a system like an oil-water separator but the outer pipe has holes in it and is filled with caustic ash. I took photographs of the site.

FOLLOW UP: 1.

*Lee Dorigan 11/4*